

Application No.: 10/829524
Amendment dated: July 23, 2007
Reply to Office action of May 2, 2007

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1(previously presented). A cutting and edge-preparing apparatus, comprising:

a housing adapted to be mounted on a workpiece;

a faceplate mounted on a front surface of said housing and being rotatable relative to said housing;

at least one tool holder mounted on said faceplate for holding a tool;

a gearbox having first gearing for turning said faceplate and second gearing connected to a power transmission shaft for advancing and retracting said tool holder relative to the workpiece; and

a motor;

said first and second gearing each having a predetermined number of teeth, and said number of teeth of said first gearing being different from said number of teeth of said second gearing; and

said second gearing having a changeable combination of gears for changing the difference between said number of teeth of said first gearing for turning the faceplate and said number of teeth of said second gearing for turning said power transmission shaft;

whereby, turning direction and turning speed of said power transmission shaft relative to turning speed of said faceplate

Application No.: 10/829524
Amendment dated: July 23, 2007
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can be changed to permit said tool holder to be moved relative to the workpiece in rapid-feed, slow-feed, and rapid-return modes.

2(previously presented). A cutting and edge-preparing apparatus according to claim 1, wherein an annular faceplate gear is attached to a rear surface of said faceplate and is engaged with said first gearing of said gearbox to rotate said faceplate relative to said housing; wherein said housing contains a speed-changing compound ring gear having two external gears with different diameters and a single internal gear; wherein said second gearing includes a feed gearing and a rapid-feed-and-return gearing, and said power transmission shaft is rotated by one of said feed gearing and said rapid-feed-and-return gearing; wherein each of said feed gearing and said rapid-feed-and-return gearing includes a compound gear that has a plurality of gears and two transmission gears that have different diameters and that are capable of being engaged with said compound gear; and wherein said number of teeth of said first gearing for rotating the faceplate and that of said second gearing for rotating the power transmission shaft are made to differ from each other by a combination of said plurality of gears of said compound gear and said transmission gears.

3(previously presented). A cutting and edge-preparing apparatus according to claim 2, wherein said compound gears of said feed gearing and said rapid-feed-and-return gearing are shifted in axial directions by shift arms; wherein said shift arms are connected to levers by rods; wherein said levers extend externally of said gearbox; and wherein said combination of said plurality of gears of said compound gear and said transmission gears of said feed gearing and said combination of said plurality of gears of said compound gear

Application No.: 10/829524
Amendment dated: July 23, 2007
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and said transmission gears of said rapid-feed-and-return gearing are changed by operating said levers.

4(previously presented). A cutting and edge-preparing apparatus according to claim 3, wherein a clutch is installed between said motor and said faceplate.

5(previously presented). A cutting and edge-preparing apparatus according to claim 4, wherein said rods control lever movement such that said compound gear and said transmission gears of said feed gearing, and said compound gear and said transmission gears of said rapid-feed-and-return gearing are not simultaneously engaged.

6(previously presented). A cutting and edge-preparing apparatus according to claim 1, wherein said second gearing includes a feed gearing and a rapid-feed-and-return gearing; wherein said power transmission shaft is rotated by one of said feed gearing and said rapid-feed-and-return gearing; wherein each of said feed gearing and said rapid-feed-and-return gearing includes a compound gear that has a plurality of gears and two transmission gears that have different diameters and that are capable of being engaged with said compound gear; wherein said compound gears of said feed gearing and said rapid-feed-and-return gearing are shiftable in axial directions by shift arms; wherein said shift arms are connected to levers by rods; wherein said levers extend externally of said gearbox; and wherein said combination of said plurality of gears of said compound gear and said transmission gears of said feed gearing and said combination of said plurality of gears of said compound gear and said transmission gears of said rapid-feed-and-return gearing are changed by operating said levers.

Application No.: 10/829524
Amendment dated: July 23, 2007
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7(previously presented). A cutting and edge-preparing apparatus according to claim 6, wherein said rods control lever movement such that said compound gear and said transmission gears of said feed gearing, and said compound gear and said transmission gears of said rapid-feed-and-return gearing are not simultaneously engaged.

8(previously presented). A cutting and edge-preparing apparatus according to claim 1, wherein a clutch is installed between said motor and said faceplate.

9-16 (cancelled).